



AMITY UNIVERSITY

— RAJASTHAN —

SDG-14: LIFE BELOW WATER

1. Institutional Commitment & Context

Amity University Rajasthan (AUR), situated in a semi-arid ecologically sensitive region adjacent to the Thar Desert, has demonstrated a strong commitment to SDG-14: Life Below Water by creating, conserving, and scientifically managing artificial freshwater ecosystems within campus and promoting water bio-sustainability research in arid environments.

Despite limited natural aquatic resources, AUR has established a sustainably managed man-made freshwater lake, nourished exclusively with treated wastewater from the STP and ETP systems, demonstrating a model for circular water economy and ecological restoration in desert regions.

The lake supports:

- Aquatic plants & native bio-flora
- Carp fish populations for nutrient cycling
- Ducks & geese contributing to balanced biodiversity
- Pollinator & micro-habitat creation

This ecological system functions as a living laboratory for biodiversity conservation, wastewater reuse, environmental biotechnology, and wetland ecosystem studies.

2. Sustainable Water & Biodiversity Practices

AUR implements integrated strategies for SDG-14 through:

- On-campus freshwater lake & wetland ecosystem
- Treated effluent reuse for water body & green belt irrigation
- Pollution prevention & plastic-free water zones
- Biodiversity conservation with selected aquatic fauna
- Soil-water-vegetation linkage in arid ecology
- Green campus water stewardship frameworks
- Watershed awareness initiatives with rural communities
- Research & innovation through Centre for Water Studies & Research (ACWSR)

AUR's campus thus serves as a **model freshwater micro-ecosystem in desert terrain**, symbolizing water resilience and sustainability innovation.



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3. Key Research & Outreach Events (2024-25)

A. Webinar on “Wastewater Biorefinery”

Date: 19 September 2024

Speaker: *Prof. Yogalakshmi K.N.*, Dean – Environment & Earth Sciences,
Central University of Punjab

The poster is for a webinar titled "WASTEWATER BIOREFINERY" organized by the Amity Centre for Water Studies and Research. It features a blue background with white and yellow text. At the top, the Amity University Jaipur logo and an A+ accreditation badge are displayed. The title "WASTEWATER BIOREFINERY" is prominently shown in blue. Below the title, the date "19th September, 2024" and time "2.30 p.m. to 4.00 p.m." are listed. The poster identifies five participants: a Guest Speaker, a main Speaker, and three Coordinators/Moderators, each with a portrait photo and their respective titles and affiliations.

Role	Name	Title	Affiliation
GUEST SPEAKER	Prof. Yogalakshmi K.N	Dean School of Environment and Earth Sciences, Central University of Punjab, Bathinda	Central University of Punjab
SPEAKER	Prof. Vinay Sharma	Dean Research and Director	Amity Institute of Biotechnology, Amity University Rajasthan
COORDINATOR	Dr. Shweta Kulshreshtha		Amity Centre for Water Studies and Research, Amity University Rajasthan
COORDINATOR	Dr. Avimanu Sharma	Assistant Professor	Amity Institute of Biotechnology, Amity University Rajasthan
MODERATOR	Dr. Shikha Pandhi	Assistant Professor	Amity Institute of Biotechnology, Amity University Rajasthan

This webinar trained students and researchers on:

- Converting wastewater into **bio-gas, biofuels, and bioplastics**
- Microbial valorization & circular bioeconomy
- Sustainable water-waste resource recovery systems

The session strengthened interdisciplinary knowledge on **bio-based solutions for urban water challenges**, supporting SDG-14 & SDG-6.



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B. National Seminar on Groundwater Sustainability

Date: 1–2 March 2025

Organised By: Amity Centre for Water Studies and Research (ACWSR) in collaboration with **Indian National Chapter–International Association of Hydrogeologists (INC-IAH)**, & Ground Water Dept., Govt. of Rajasthan

Highlights:

- **200+ delegates**
- **55 research papers**
- Expert plenaries by national and global scientists including **Ms. Karlene Maywald, Former Minister, Australia**



Outcomes included:

- Enhancing policies for **groundwater protection & recharge**
- Strengthening researcher-practitioner networks
- Dialogues on **aquifer management, climate-water resilience, and rural water security**

C. World Water Day Webinar – Glacial Preservation & National Water Security

Theme: UN Glaciers' Preservation Year (2025)

The webinar emphasized:

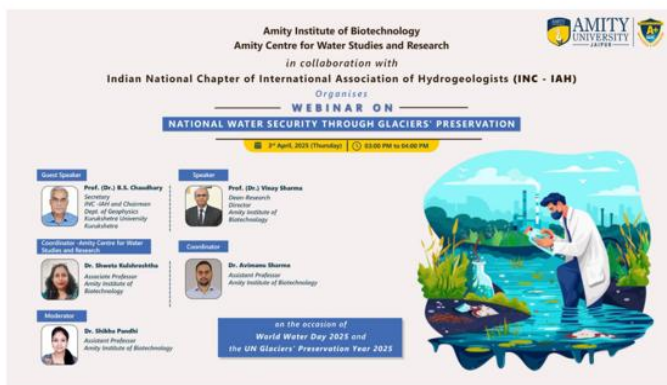


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- **Melting glaciers and ocean-freshwater linkages**
- National security impacts of Himalayan cryosphere changes
- Glacial resource monitoring & future water supply planning

Participants learned about **cryosphere-hydrology links**, climate threats to Indian water systems, and the **global nexus between glacier protection & ocean health**.

"National Water Security through Glaciers' Preservation" in a Webinar being organized on the occasion of World Water Day 2025 and in recognition of the UNO Glaciers' Preservation Year 2025.



4. Research Capacity & Innovation

Student's Presentation at International Conference on Multidisciplinary Approaches in Life Sciences Held at The IIS University, 22-23 January 2025



Ms. Priyanshi Thathera won First Prize in poster presentation.

Student's Presentation at International Conference on Multidisciplinary Approaches in Life Sciences Held at The IIS University, 22-23 January 2025



Ms. Shefali Dubey won Second Prize in poster presentation.



5. Quantitative Impact (2022-2025)

Parameter	Outcome
Artificial lake ecosystem created	1 sustainable water body
STP-treated water reused annually	~100% campus irrigation + lake replenishment
Scientific biodiversity introduced	Fish & aquatic birds for eco-balance
Major research events	3 flagship programs
Researchers engaged	200+ delegates & scholars
Student participation	300+ learners engaged
Collaborators	Govt agencies, universities, INC-IAH

6. THE Ranking Indicator Mapping

THE indicator	Evidence @ AUR
14.1.1	Water waste reduction, STP-based circular reuse
14.2.1	Awareness programs on ocean-freshwater sustainability
14.3.1	Groundwater & wetland research & seminar
14.4.1	Collaboration with national & international water authorities
14.5.1	Training on water bio-treatment & cryosphere conservation

7. Monitoring & Governance

SDG-14 initiatives are monitored by:

- Centre for Water Studies & Research (ACWSR)
- Sustainability Committee & IQAC
- Annual sustainability reporting system
- Campus environmental audit & water-use records

8. Future Roadmap (2025–2030)

- Expand campus aquatic biodiversity
- Launch Water-Sustainability Summer School
- Rural outreach for soil-water-vegetation conservation
- Joint publications & MoUs with water & ecology institutes at national and international level..